

WHAT IS CLAIMED IS

1                   1       A method for converting a computer program into an executable  
2   object having symbol references that can be redirected at run-time, the method executing  
3   on a computer system, the computer system including a processor and storage device, the  
4   computer system further including a computer program having symbolic references to  
5   original definitions having original names, the method comprising the steps of:  
6                    identifying one or more of the original names;  
7                    renaming one or more original names used in the computer program with  
8   new names; and  
9                    creating an association between the original names and the new names so  
10   that symbolic references to the original names invoke a reference to the new names.

2. The method of claim 1, further comprising the step of  
storing information about the associations in a table format.

1           3.       The method of claim 2, further comprising the steps of  
2           causing a symbolic reference to reference an entry in the table; and  
3           associating a pointer to an original definition with the entry.

1                   4.       The method of claim 1, wherein a compiler is used to compile the  
2   computer program, the method further comprising the step of  
3                   using information generated by the compiler to perform the step of  
4   identifying original names in the computer program.

1                    5.        The method of claim 1, wherein a symbolic reference is to a data  
2        structure.

1                   6.       The method of claim 1, wherein a symbolic reference is to a  
2   program instruction.

1                    7.        The method of claim 1, wherein a symbolic reference is to a  
2    resource.

1                    8.        The method of claim 1, wherein a symbolic reference is to an  
2.    object.

1                   9.     The method of claim 1, wherein the Microsoft Developer's  
2     Environment is used to compile the computer program, wherein the Microsoft  
3     Developer's Environment includes utilities for generating information about symbolic  
4     references in the computer program, the method further comprising the steps of  
5                   using information from one or more files to generate one or more auxiliary  
6     files that include information on original names; and  
7                   using the auxiliary file to compile an add-on module for execution in  
8     conjunction with the computer program.

1                   10.    The method of claim 1, wherein the Microsoft Developer's  
2     Environment provides for compiling the computer program by using a linker that  
3     generates a .map file, the method further comprising  
4                   wherein the step of using information from one or more files to generate  
5     an auxiliary file includes the substep of using the .map file to derive a .def file that is  
6     included as at least a portion of the auxiliary file.

1                   11.    A method for providing run-time modification of functionality in a  
2     computer program that has a substitute reference for one or more symbolic references  
3     used in the computer program, the method executing on a computer system, the computer  
4     system including a processor and storage device, the method including the steps of:  
5                   loading the computer program into the computer system;  
6                   loading a module that includes an item definition into the computer system;  
7     and  
8                   executing a process to associate the substitute reference with the item  
9     definition.

1                   12.    The method of claim 11, wherein the method further comprises the  
2     steps of:  
3                   associating the substitute reference with the item definition by executing  
4     script language instructions.

1                   13.    The method of claim 11, wherein the method further comprises the  
2     steps of:

- 3 associating the substitute reference with the item definition during
- 4 execution of the computer program by concurrently executing script language *instructions*
- 5 to control the associations.

Approved for Release